

The Norwegian Program on Quality Assurance in Radiotherapy (KVIST)

Organisation, benefits and experiences

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Radiotherapy in Norway (4.8 million people)

Health care system

- Centralized, public founded
- 26 public hospital trusts and 72 hospitals

Radiotherapy provided in

1997: 5 departments
19 accelerators
1 Cobalt unit

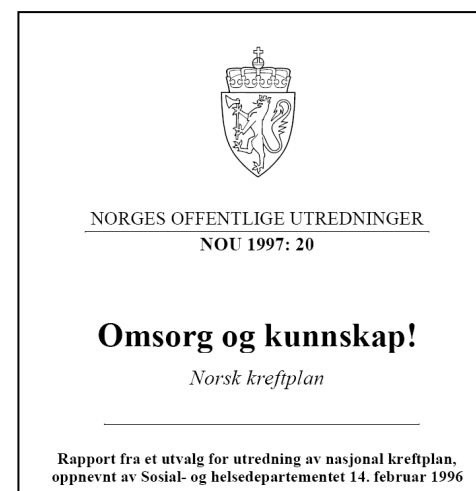
2011: 9 departments
40 accelerators

● RT departments 2011

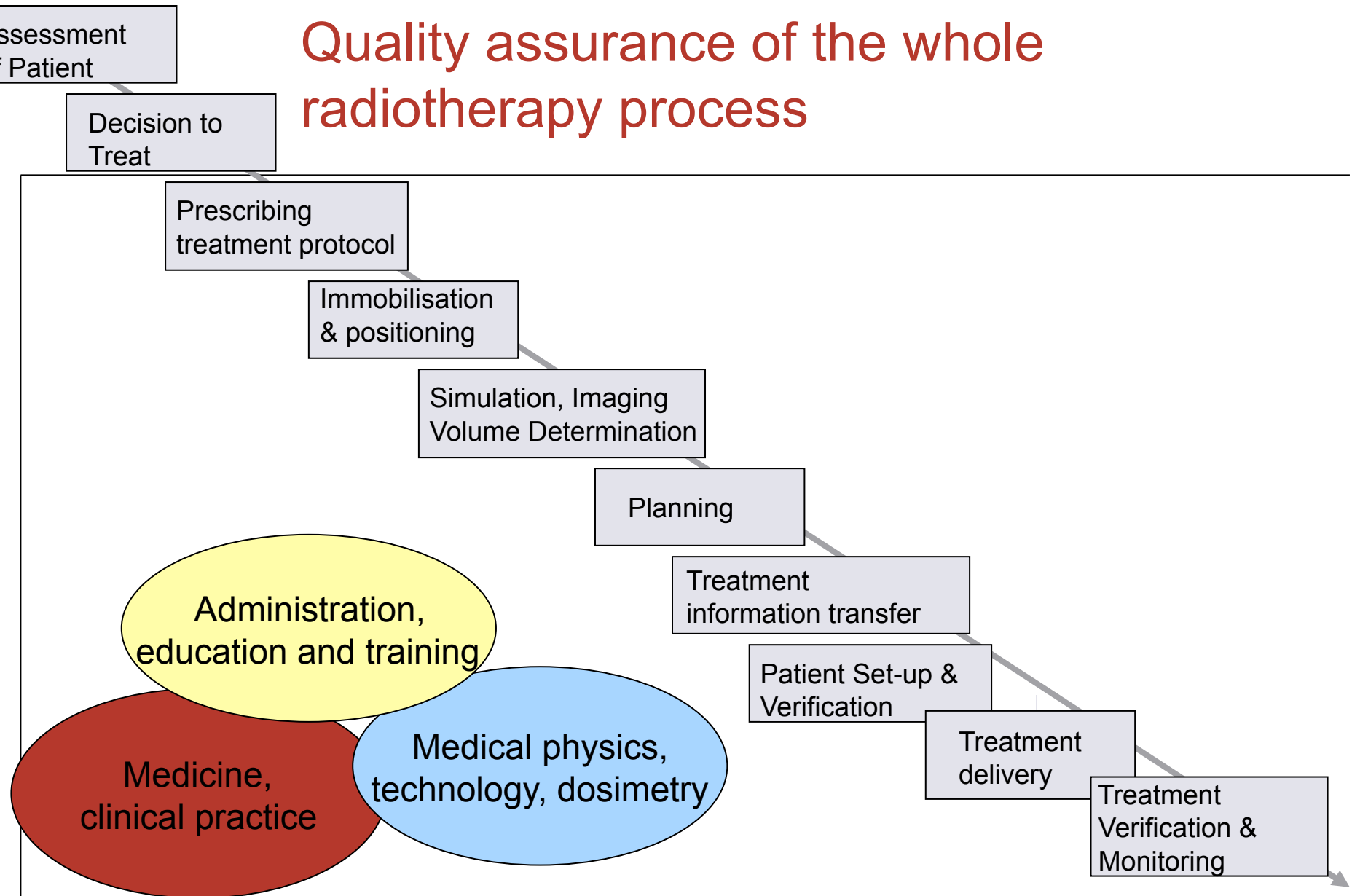


Background for a RT quality assurance initiative

- 1997: Norwegian public cancer plan, NOU 1997:20
..since radiotherapy is given high priority in cancer care good quality assurance is required...
- Late 90ties: European political trend towards development of national QA programs in health care
- Public budget 2000: 4 mill. NOK (~ 500 kEuro) allocated to NRPA to establish a quality assurance program in radiotherapy - KVIST



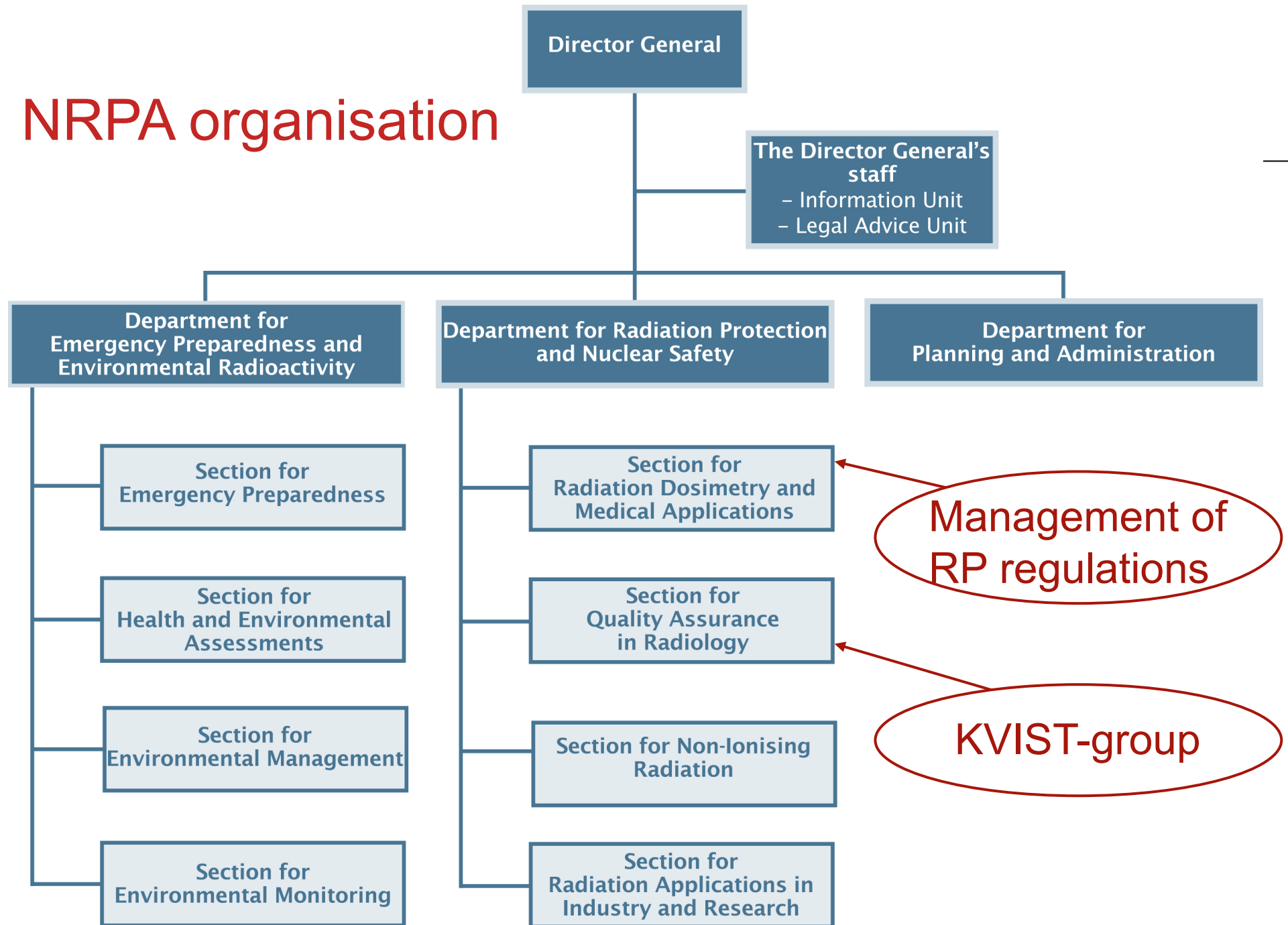
Quality assurance of the whole radiotherapy process



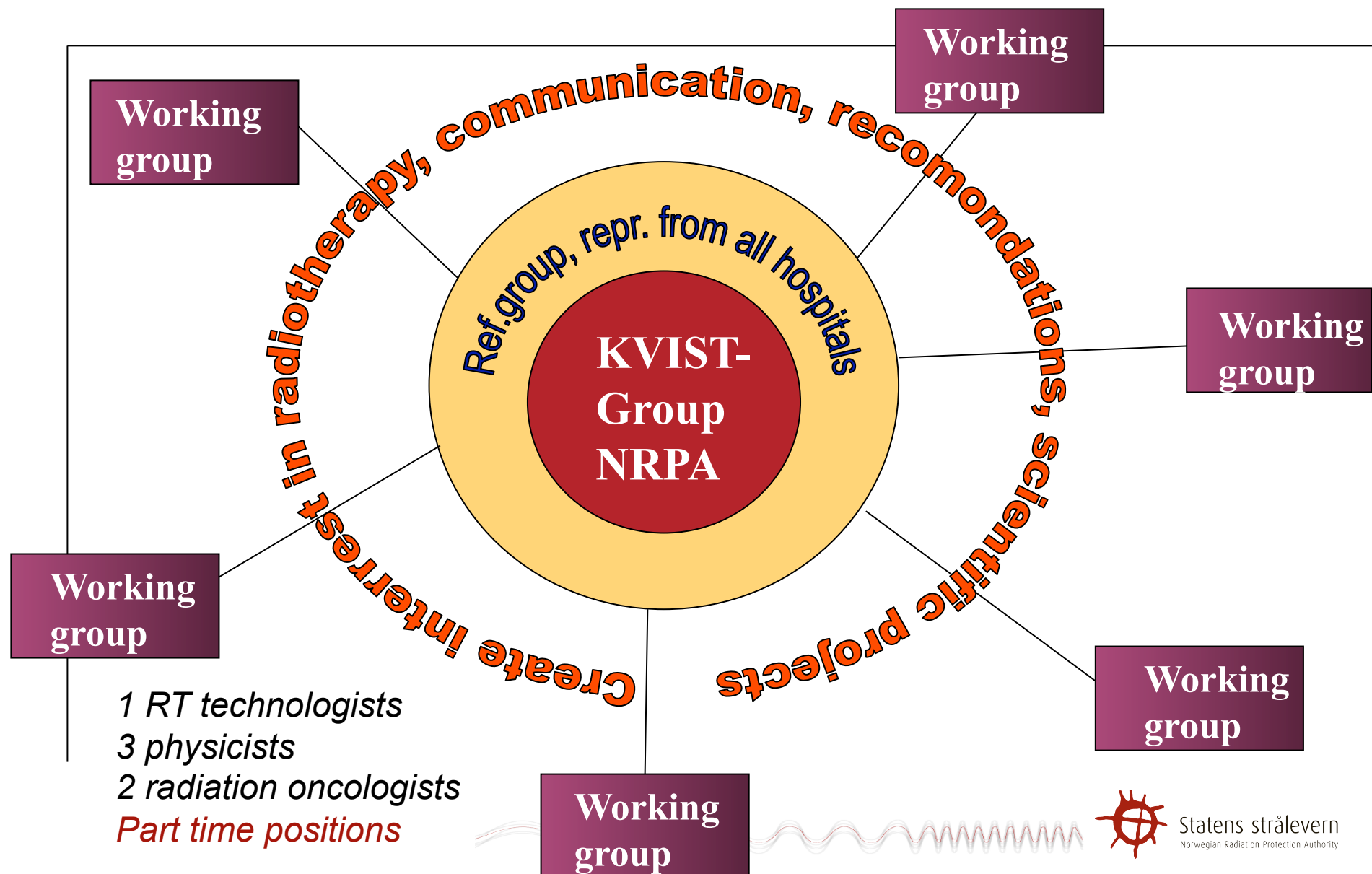
Regulations versus professional quality standards



NRPA organisation

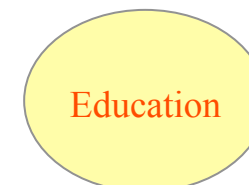
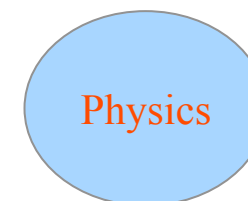
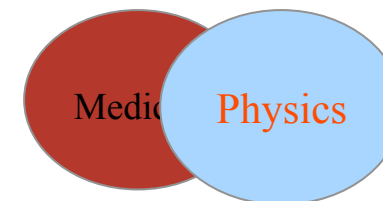


Organisation of the KVIST program



Working groups initiated in 2001

- National recommendation on prescription, recording and reporting in radiotherapy
 - Chairman - Sverre Levernes, KVIST
 - Report published 2003 (only in Norwegian)
- Implementation of TRS 398, IAEA dosimetric protocol
 - Chairman - Hans Bjerke, KVIST
 - Report published 2003 (in English)
- Guidelines for training of medical physicist in radiotherapy in Norway
 - Chairman - Taran Paulsen Hellebust, KVIST
 - Report published 2005 (only in Norwegian)



Reports available on www.nrpa.no



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Clinical audit – a feasibility study 2003 - 2004

- Chairman – Dag Clement Johannessen, KVIST
- Report published 2004 (only in Norwegian)

Medicine

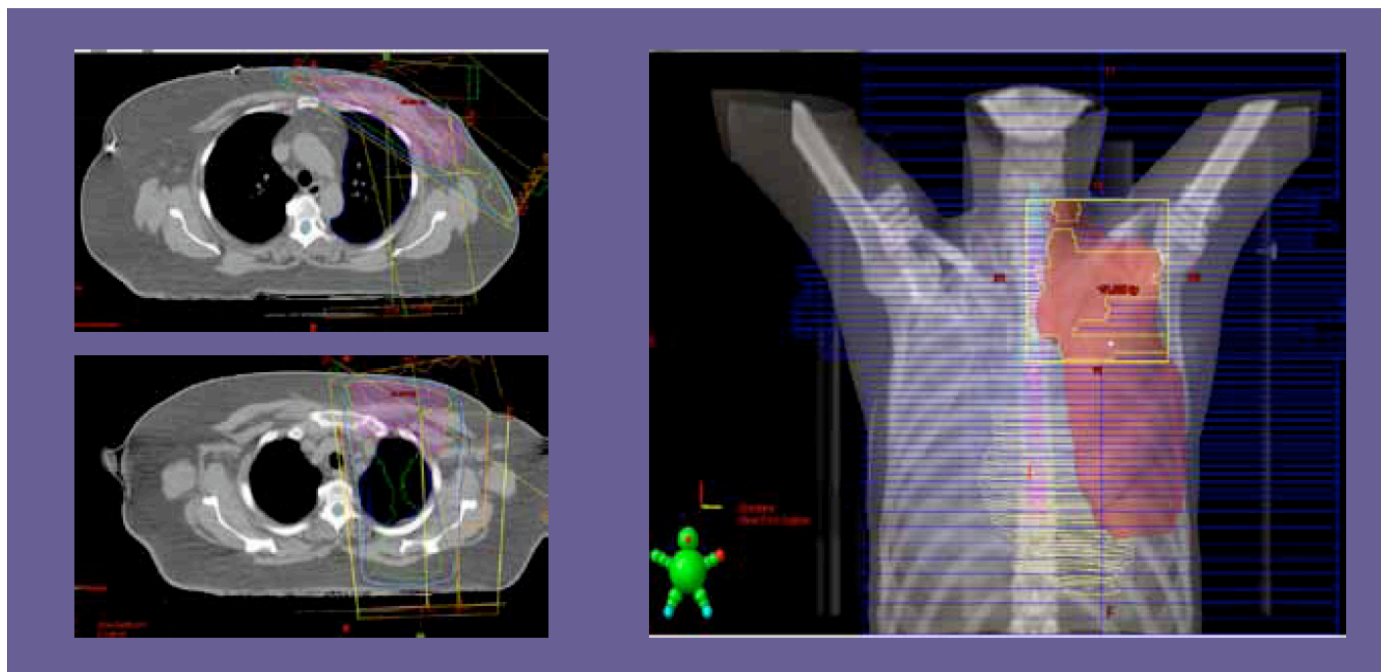
- Peer review, site visit, multidisciplinary group (three oncologists, one physicist and one RTT + two members from the KVIST-group)
- Treatment of 40 patients with skeletal metastasis
- Indications, planned treatment, performed treatment (dose, monitor calculations, verification) in relation to local and national guidelines



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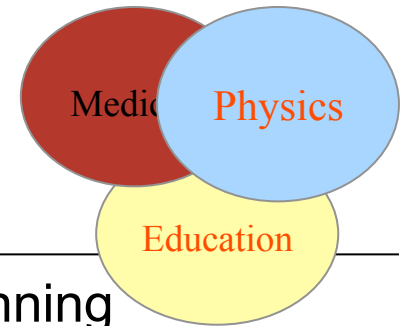
Clinical audit, breast cancer 2009-2011

- 2009: Two hospitals
- 2010: Three hospitals
- 2011: Five hospitals
- Pool of team members available (8 oncologists, 6 physicists, 4 RTTs)



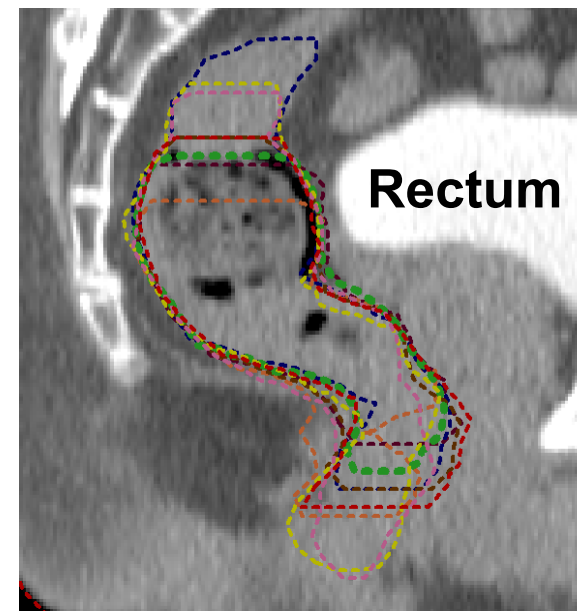
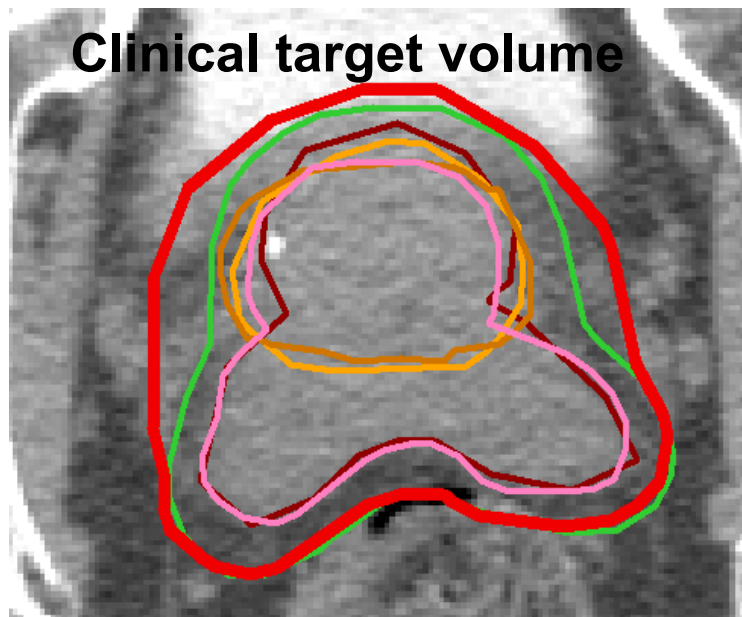
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Clinical audit - cases

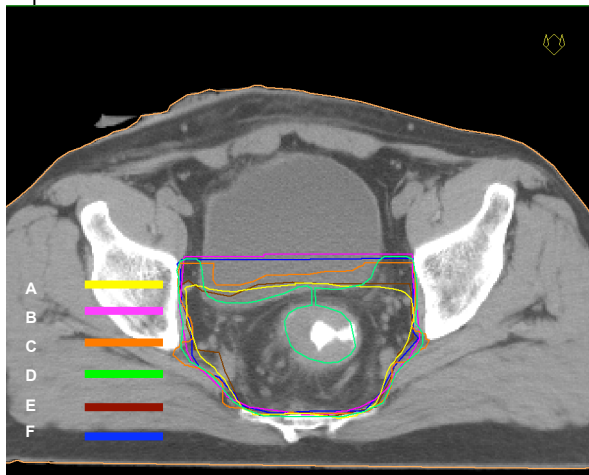
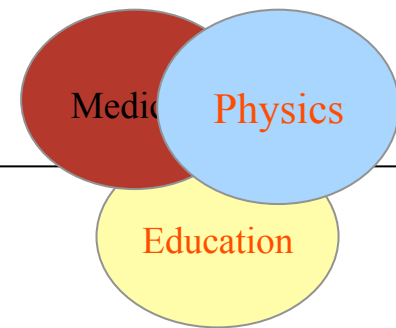


Comparing local practice for delineation and treatment planning

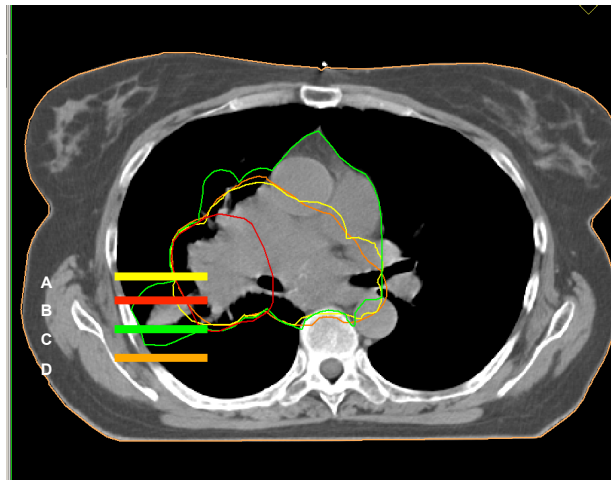
- Cases with all work up material are distributed to all RT departments
- Delineation of target volumes and organs at risk / treatment planning based on local guidelines
- Electronically collocation of volumes and dose distributions
- Arrange workshops where the results are presented and discussed



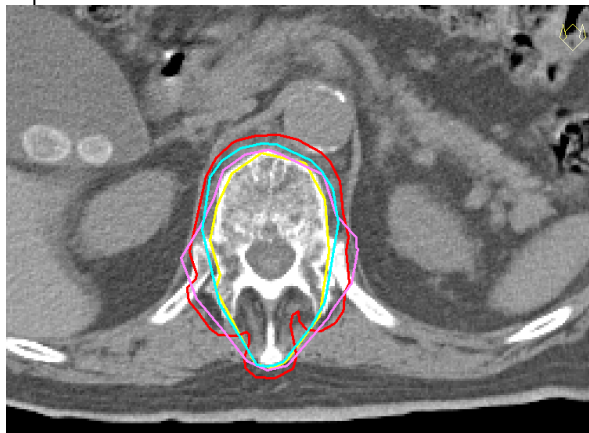
Other sites



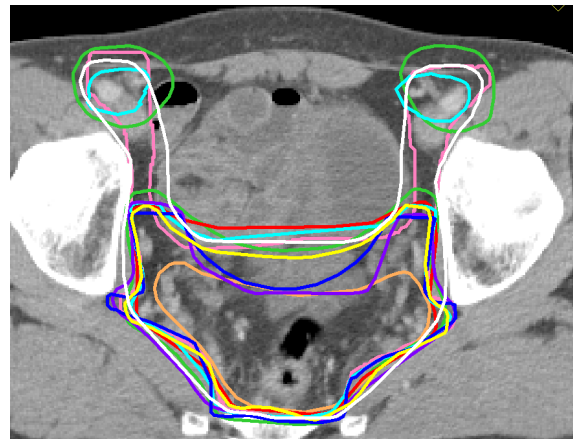
Rectum (2006)



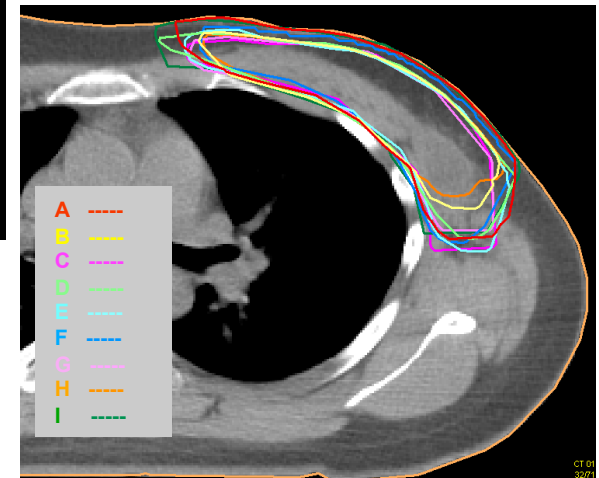
Lung (2006)



Columna (2009)



Pelvic lymph nodes (2010)



Breast (2008)



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National guidelines for radiotherapy (in cooperation with National Cancer Groups)

AIM to ensure that all important elements in the RT process are described in national harmonized guidelines

- Template for radiotherapy guidelines based on ICRU reports

Guidance provided on the following cancer groups:

- Lung cancer
 - Non-small cell lung cancer, NSCLC
 - Small cell lung cancer, SCLC
 - Palliative radiotherapy of lung cancer
- GI cancer
 - Preoperative radiotherapy
 - Postoperative radiotherapy
 - Oesophagus cancer
 - Anal cancer

Work currently in progress on

- Prostate cancer
- Gynecologic cancer

New future initiatives on

- Lymphoma cancer group
- Head & neck cancer group

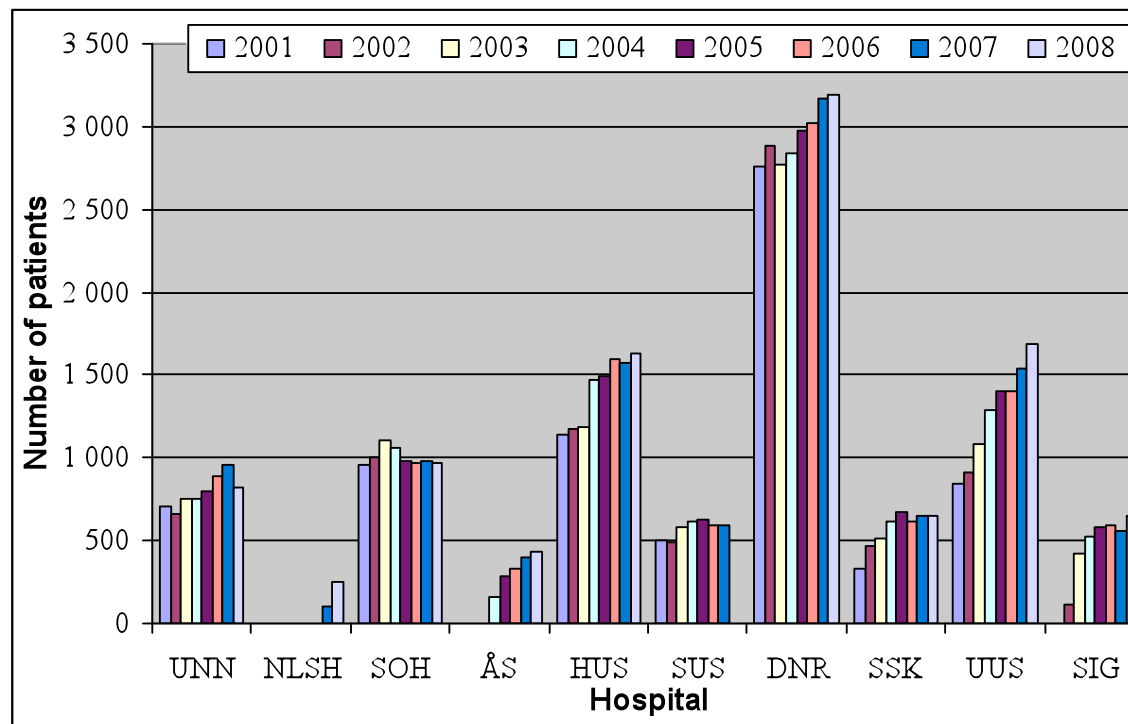
Reports available on www.nrpa.no



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Reports from RT centres: Patterns of care data

All radiation therapy centers provide
annual reports to KVIST

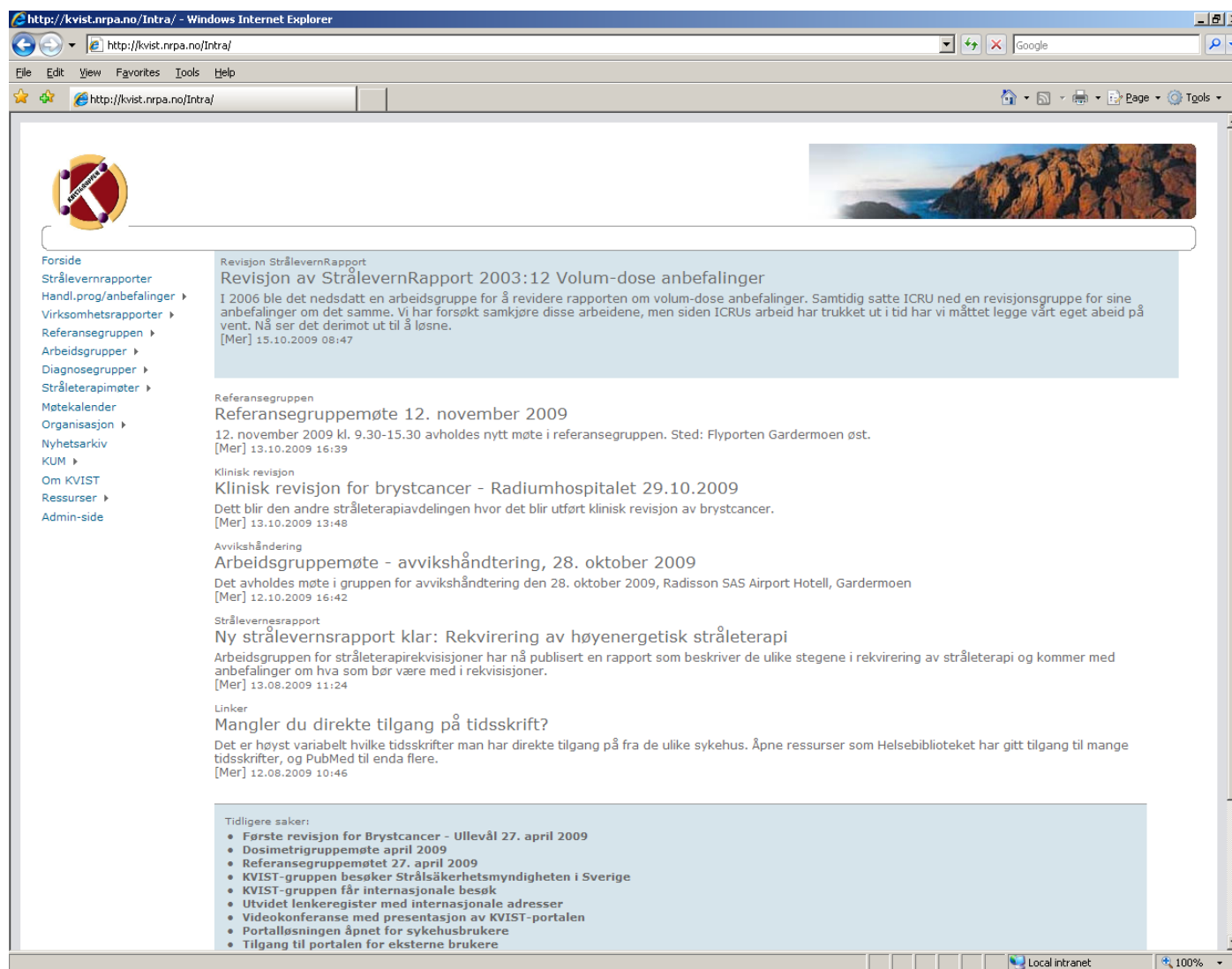


No of patients treated in each radiation therapy centre over time



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The KVIST portal solution <http://kvist.nrpa.no>

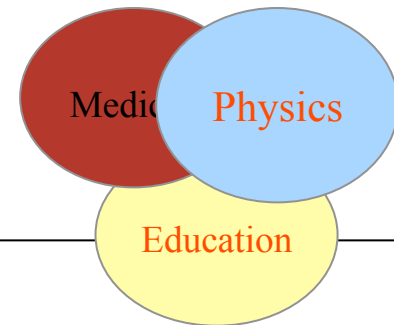


- Password protected portal administered by KVIST
- Database solution for reporting of data from the RT centres
- Minutes from meetings of the national reference group and WG's
- Each working groups has dedicated area on the portal
- Information, NEWS, meeting calendar



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Annual radiation therapy meeting



- Annual forum from 2001
- Multidisciplinary for oncologists, medical physicists and RT technologists
- "Workshops" as part of the meeting



Pierre Scalliet, Røros 2001

What is unique with the KVIST-project?

- The KVIST initiative is founded in a national body
- The member of the KVIST group work part time in radiotherapy departments which gives legitimacy
- All KVIST activities are multidisciplinary with multi centre representation
- The KVIST group acts as secretariat and coordinates all types of national QA projects in radiotherapy
- The KVIST group act as editors for harmonized national guidelines
- The recommendations and guidelines are developed by national consensus
- **The work is performed by the radiotherapy community it self, thus creating an atmosphere of ownership**

